The Effects of Seasons on Moods of Introverts and Extraverts

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Abstract

The current study investigated the correlation between the four seasons and the perceived moods of extraverts and introverts. There were 61 participants, mostly college students. Participants completed two questionnaires to assess extraversion and perceived moods based on the seasons. Results showed extraversion scores and seasonal affect scores of autumn were significantly correlated, potentially suggesting that extraverts have a preference for this season.

Background

Denissen et al. (2008) examined individual weather patterns and how they affect individuals. This study found that research on this subject was limited. None of the six weather promoters they studied had any significant amount effect on one's positive mood. Most studies that focus on seasons focus on the winter months because of the extremities, but research in the study of all four seasons is lacking. Unlike the day to day changes in weather of a particular season, the seasons themselves have specific characteristics that define them. Rastard, Ulfberg, and Siödén, (2006) specifically looked into winter seasons in Sweden and how it affects seniors in high school. They found that self reported depressive moods during the winter season was at 20% and girls experienced depression at a higher rate. Humans create time-based constructs and events. For example, schools typically start up in the fall when temperatures begin to cool down and leaves begin changing. For children this is socially meaningful. For the typical child, summer means freedom away from schoolwork and more time to do things they want to do. Winter may be dreary because of the prolonged periods of frigid temperatures and limited sunlight, but it also has many holidays. Spring may be rainy, but it also may symbolize new growth and new beginnings for many. These external factors must be taken into consideration along with the weather and temperatures that a particular season brings. How might one's personality effect the way in which they perceive the seasons and all that comes with them? Extraverts are generally more outgoing, more sociable and appear to show their happiness more outwardly than introverts. Other factors such as self-esteem and emotional intelligence can also be positively related to extraversion (Wu, Lu, Chen, & Xiang, 2018) and therefore can be correlated with how an extravert might react to certain seasons as compared to an introvert. Extraversion is related to a more positive mood and lower fatigue over a period of time (Leikas & Ilmarinen, 2017). Extraverts and introverts may deal with stress very differently, but Nagata, McCormick and Piatt (2018) found that extraversion does not have a strong correlation with depression. As previously mentioned, it is necessary to look into more than just the weather patterns and temperatures of a particular season. Some seasons are busier than others and this can play a huge role in how an introvert might react emotionally versus an extrovert. The current study examined this. It was hypothesized that those with higher levels of extraversion would have a generally more positive outlook on the extremities of the four seasons as compared to those that score low on the extraversion scale.

Method

Forty seven college students at a medium sized private college in eastern upstate New York State participated as well as 14 acquaintances of the researcher. Much of the sample was female (77%) and 56% were Caucasian, 16% Black/African American, 13% Hispanic, 3% Asian, and 11% biracial. Two questionnaires were given to participants. One questionnaire, Extraversion (Eysenck,1964) determined participants' level of extraversion with 33 yes/no questions (e.g., "Do other people think of you as being very lively?"). Another questionnaire, Seasonal Affect Scale, which contained 25 items and was developed by the researcher, determined how each of the four seasons affected the moods of each participant (e.g., "I Feel more energized to take care of myself in the Spring"). Four subscales were created (one for each season) by averaging relevant items. High scores indicate a more positive outlook on each particular season.

Results

To test the hypothesis that scores on the extraversion scale would be positively correlated with scores on the Seasonal Affect Scales, Pearson correlation coefficients were computed. Results showed extraversion scores and seasonal affect scores of autumn were significantly correlated, $r(58)=.30$, $p=.04$; there was no statistically significant correlations between extraversion scores and affect scores for other seasons, $p>.05$. The remaining questions on the Seasonal Affect Scale did not fit into the subscale categories but were about seasons and opinions in general. Extraversion scores were significantly correlated with participants' enjoyment of being outdoors was, $r(58)=.36$, $p<.01$. Extraversion was not significantly correlated with participants perceiving their moods changed based on the weather outside, $r(59)=.09$, $p=.50$. The question regarding if holidays have an effect on feelings towards a specific season, $r(59)=.02$, $p=.88$ also did not have a significant correlation with extraversion. Extraversion and the level of energy on shorter days of the year were also not significantly correlated, $r(56)=.06$, $p=.64$.

Discussion

Results show that extraversion does not have a strong correlation with any of the subscales on the seasonal affect scale, and therefore does not support the hypothesis that extraverts would have a generally more positive outlook on the seasons. The closest correlation was with the season of Autumn, but based on the internal consistency of the items, many of the survey questions could not be counted. Therefore, it is possible that the remaining questions did not actually predict moods on the season, but in fact, lacked construct validity and measured other variables such as neuroticism. Much of the content of what was left measured anxious feelings and depressed feelings instead of directly about the season of Autumn. A shortcoming of this research is the fact that the seasonal affect scale unintentionally focused on people participating in an academic calendar school year. For example, schools typically begin in the fall, adding many more tasks and things to do for students of all ages. But those that are not in an academic setting may have more consistent schedules. Future research should be done using a longitudinal design. Extraversion scales can be given at the beginning of the experiment, and then participants will be asked to fill out a survey in the middle of each season to determine how they feel about each season while they are experiencing it. Of course, there are limitations to this as this will take approximately one year to complete, but the strengths of a longitudinal design would be worth the effort.

References

Denissen, J. J. A., Butalid, L., Penke, L., & Van Aken, M. A. G. (2008). The effects of weather on daily mood: A multilevel approach. *Emotion*, *8*, 662–667. https://doi.org/10.1037/a0013497

Leikas, S., & Ilmarinen, V.-J. (2017). Happy now, tired later? Extraverted and conscientious behavior are related to immediate mood gains, but to later fatigue. *Journal of Personality*, *85*, 603–615. https://doi.org/10.1111/jopy.12264

Nagata, S., McCormick, B., & Piatt, J. (2018). The effect of leisure coping on depressive symptoms among individuals with depression: Examination of potential confounding effects of physical activity and extraversion. *Psychology, Health & Medicine,* 654-666. https://doi.org/10.1080/13548506.2018.1557711

Rastad, C., Ulfberg, J., & Sjödén, P.-O. (2006). High prevalence of self-reported depressive mood during the winter season among Swedish senior high school students. *Journal of the American Academy of Child & Adolescent Psychiatry*, *45*(2), 231–238. https://doi.org/10.1097/01.chi.0000190466.93447.0e

Wu, Y., Lu, J., Chen, N., & Xiang, B. (2018). The influence of extraversion on emotional expression: A moderated mediation model. Social Behavior and Personality: An International Journal, 46, 641-652. https://doi.org/10.2224/sbp.7049